

Abstract of the Disclosure:

A method produces a thermoelectric layer structure on a substrate and the thermoelectric layer structure has at least one electrically anisotropically conductive V-VI layer, in particular a  $(\text{Bi}, \text{Sb})_2 (\text{Te}, \text{Se})_3$  layer. The V-VI layer is formed by use of a seed layer or by a structure formed in the substrate, and disposed relative to the substrate such that an angle between the direction of the highest conductivity of the V-VI layer and the substrate is greater than  $0^\circ$ . The orientation can also be effected by an electric field. Components are formed of the thermoelectric layer structure in which the angle between the direction of the highest conductivity of the V-VI layer and the substrate is greater than  $0^\circ$ . As a result, the known anisotropy of the V-VI materials can advantageously be used for the construction of components.

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